

Work Order ID 81631***81631***

Page 1

Friday, March 16, 2012 10:40:48 AM

Item ID: D206-642-541

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Replacement Skidtube

Start Date: 3/16/2012 Start Qty: 1.00

1

Cust Item ID:

Required Date: 3/28/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan: Date: 11-03-16

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr

Revision Nbr

D3274

D

100

0.00

100

DOCUMENT CONTROL

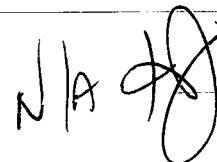
DC

Memo

0.00

Document Control

Photocopy bluefile & type labels per PPP D206-642-541 CHG003



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries

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 QC: Date: SPC (Y/N): Date: Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

110

110

Skidtubes

Skidtubes

Skidtubes

Memo

VERIFY AND INSPECT THE MATERIAL PRIOR TO USE

1- Bend FWD end of tube using bend prog D3274 FWD and foil 10 as per dwg D3274, cut fwd end of tube with saw table setup D3274.

2- remove fwd indexing ridge as per dwg D3274. Prepare for welding

3- weld fwd cap as per dwg D3274 and OSI004

AR Aluminum Rod Batch: m120164

4- grind fwd cap weld on top surface only

5- Cut AFT end of tube at 170.9" as per dwg D3274 and deburr end.

6-Drill Aft cap pilot hole using DT8025

7 -Cleco DT8025 in position and install pilot hole drill Jig DT8742A,B,C,D.

Drill 3/16" pilot holes as per Dwg D3274

8 -Remove inner indexing ridge on aft end of skidtube as per Dwg D3274 scribe batch #

9 -Open aft end cap holes to Ø0.208" as per Dwg D3274. Deburr aft end.

SAD 12-04-02

att 11-04-03

38E to 12/04/04

7/6/12-4-5
/CF

-DC 12/04/05

7/6/12-4-5
/CF

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
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Run Start ***NR1***

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Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

114

QC5- Inspect part completeness to step on W/O

0.00


114

QC

Memo

0.00

Quality Control

 12-4-9

116

QC10- Inspect visual per QSI004- ground welds

0.00


116

QC

Memo

0.00

Quality Control

 12-04-09

120

Chemical Conversion Coat per QSI005 4.1

0.00


120

HandFinish

Memo

0.00

Hand Finishing

 12-4-9

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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 Required Date: 3/28/2012 Req'd Qty: 1.00 *1* Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	QC7-Inspect Chemical Conversion Coat	0.00							
130									
QC	Memo	0.00							
Quality Control									
150		0.00							
150	Skidtubes								
Skidtubes	Memo	0.00							
Skidtubes	1-Open Ø0.313" and 0.375" crossbolt spacer holes as per Dwg D3274								
	2-Deburr crossbolt spacer holes as per Dwg D3274 and blow out chips from inside the tube								
	3-Bond web in place as per Dwg D3274 & QSI 015.								
	A/RSikaflex-291 M1208-13								
	Sikaflex expire date: 12-08-13								
	Start: 7:45 Time: 12-4-10								
	Finish: 12-04-13 Time: 11:00								
	(Adhere for 12 hours)								

① SAD 12-04-09

> BB 12/04/09

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Required Date: 3/28/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

160

QC5- Inspect part completeness to step on W/O

0.00

160

QC

Memo

0.00

Quality Control

1 0 8E 12/04/11

170

Skidtubes

0.00

170

Skidtubes

Memo

0.00

Skidtubes

1-Bend AFT end of tube using bend prog. D3274 AFT as per dwg D3274. Install drop pins in crossbolt spacer holes to maintain web position.

> DC 12/04/11

2- DRILL PILOT HOLES FOR WEARPLATES USING D3274-1T2
OPEN HOLES TO .297" . Deburr

> DC 12/04/11

3-DRILL TOE PIN HOLE .640" DIA AS PER DWG USING DT8935 FWD
END OF TUBE
DEBURR INSIDE OF HOLE AS NECESSARY (DO NOT ENLARGE HOLES)
REMOVE ANY FOREIGN OBJECTS INSIDE OF TUBES

4- Countersink crossbolt spacer holes as per Dwg D3274

5- prepare for welding

> CF 12.4.11

W/O:		WORK ORDER CHANGES					
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Start Date: 3/16/2012 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 3/28/2012 Req'd Qty: 1.00 ***1*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180	QC5- Inspect part completeness to step on W/O	0.00				1	0		BE12/04/13
180									
QC	Memo	0.00							
Quality Control									
190		0.00							
190									
Skidtubes									
Skidtubes	Memo	0.00							
	1-Insert D2649 & D3275-1 crossbolt spacers. Weld as per QSI 004 and Dwg D3274. Remember to back drill each hole before welding the other side. Use aluminum rod								
	A/RAluminum Rod <u>m/20164</u>								
	3-Grind cross bolt welds flush as per Dwg D3274.								
	4-Counterbore 5/16" x 0.750" deep as per Dwg D3274 and deburr.								

BE 12-04/13
12-4-16
CE 12/04/16

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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1

Cust Item ID:

Required Date: 3/28/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
200	QC5- Inspect part completeness to step on W/O	0.00							
200									
QC	Memo	0.00							
Quality Control									
210	QC10- Inspect visual per QSI004- ground welds	0.00							
210									
QC	Memo	0.00							
Quality Control									
220	Pressure Wash per QSI005 4.3	0.00							
220									
HandFinish	Memo	0.00							
Hand Finishing	Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch								

MG 12-4-19

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
230	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum	0.00							
230									
Powdercoat	Memo	0.00							
Powder Coating	START TIME: 9:10								
	OVEN TEMPERATURE: 320°F								
	FINISH TIME: 9:40								
240	QC3- Inspect Part Finish	0.00							
240									
QC	Memo	0.00							
Quality Control									
250		0.00							
250	HandFinishing								
HandFinish	Memo	0.00							
Hand Finishing	1-Install Nut Plate as per Dwg D3274. Apply LPS-3 to Nut Plate and rivets. A/RN/ALPS-3 1114596								
	2-Install inserts as per Dwg D3274. Use a drop of Sikaflex inside insert holes a A/RSikaflex-291 1112221 Sikaflex expire date: 13101								

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Required Date: 3/28/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start ***NR1***

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
260	QC5- Inspect part completeness to step on W/O	0.00							
260									
QC	Memo	0.00							
Quality Control	Inspect Nut Plate & Inserts								
270		0.00							
270									
HandFinish	HAND FINISHING RESOURCE #1	0.00							
Hand Finishing	Memo	0.00							
	1-Install wearpads & gaskets as per Dwg D3274.								
	2-Install ring as per Dwg D3274								
	A/RSikaflex-291 <u>11/12/22</u>								
	Sikaflex expire date: <u>13/01</u>								
	3-Inspect for foreign objects as per QSI 024								
	4-Spray inside of tube on both sides of web with LPS-3								
	A/R LPS-3 Batch: <u>N/A</u>								
	5-Install Aft Cap and seal with Sikaflex. Clean excess adhesive.								
	A/RSikaflex-291 <u>11/12/22</u>								
	Sikaflex expire date: <u>13/01</u>								

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280	QC5- Inspect part completeness to step on W/O	0.00							
280									
QC	Memo	0.00							
Quality Control									
290	Identify as per dwg & Stock Location: _____	0.00							
290									
Packaging	Memo	0.00							
Packaging									
300	QC21- Final Inspection - Work Order Release	0.00							
300									
QC	Memo	0.00							
Quality Control									

5/12/12

PR280614

12/4/30

12/5/11

MLJ 12/04/30

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Picklist Print

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Parent Item: D206-642-541

D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 3/16/2012

Required Date: 3/28/2012

Start Qty: 1.00

Required Qty: 1.00

Comments:

IPP Rev:B05.09.23 Revised per D206-642 Rev. JKJ/JLM
IPP Rev:C 07-02-23 Added SS Wearplates & Gaskets JLM
IPP Rev:D 07-12-06 replace NAS1515H3L to D3672-1 DD
IPP Rev:E 08-04-17 as per PAR 08-015 DD verified by:EC
IPP Rev:F 08-06-02 add comment DD verified by:EC
IPP Rev:G 08-10-09 revise details DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2600-1-190		Manufactured	No			110	Each	121.0000	1	1			
D2600-1-190									**			SAD 12-04-02	
Extrusion Round 3" 206													

Location	Loc Qty	Loc Code
HALL	45	
69622	45	
LG	76	
76912	76	

D3285-1		Manufactured	No			110	Each	57.0000	1	1			
D3285-1									**			BE12-04-04	
Cap													

Location	Loc Qty	Loc Code
LG002	57	
52511	10	
52647	47	

D3282-041		Manufactured	No			150	Each	5.0000	1	1			
D3282-041									**			CF 12-4-10	
Float Web (206L/407)													

Location	Loc Qty	Loc Code
LG	5	
74294	1	
77498	4	

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D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 3/16/2012

Required Date: 3/28/2012

Start Qty: 1.00

Required Qty: 1.00

D2649 Manufactured No 190 Each 1,431.000 12 12

D2649

Cross Bolt Spacer

BE 12/04/13
B 79564 x12

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
LG	974	
77574	2	
79502	403	
79503	399	
79504	14	
79565	156	
LG001	457	
65317	1	
68224	2	
68507	11	
71355	2	
72704	2	
72841	11	
73390	8	
73857	21	
73858	53	
73859	4	
73860	4	
78020	6	
78583	2	
79566	330	

W/O:		WORK ORDER CHANGES					
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Parent Item Name: Replacement Skidtube

Start Date: 3/16/2012

Required Date: 3/28/2012

Start Qty: 1.00

Required Qty: 1.00

D3275-1 Manufactured No 190 Each 236.0000 12 12

D3275-1

Crossbolt Spacer

**

BE 12/04/13

Location	Loc Qty	Loc Code
LG	103	
80184	103	
LG002	133	
66930	106	
73393	10	
74437	17	

12

CR3212-4-03 Purchased No 250 Each 1,460.000 2 2

CR3212-4-03

Cherry Rivet

**

HL 12/04/19

Location	Loc Qty	Loc Code
FP002	470	
114859	470	
ST331	990	
110139	2	
119017	988	

V2

D3415-041 Manufactured No 250 Each 22.0000 1 1

D3415-041

Nut Plate

**

HL 11/04/19

Location	Loc Qty	Loc Code
ST042	22	
67605	22	

V1

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 4

Friday, March 16, 2012 10:40:53 AM

Work Order ID: 81631

81631

Parent Item: D206-642-541

D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 3/16/2012

Required Date: 3/28/2012

Start Qty: 1.00

Required Qty: 1.00

CCR264SS3-3

Purchased

No

250

Each

603.0000

2

2

CCR264SS3-3

Cherry Rivet

**

u 12/04/19

Location

Loc Qty

Loc Code

ST331

603

113973

2

117849

125

119017

476

XZ

ALS4-1032-130

Purchased

No

250

Each

4,413.000

78

78

AI S4-1032-130

Insert

**

u 12/04/19

Location

Loc Qty

Loc Code

ST280

409

119084

116

120671

293

ST281

4004

120410

74

120807

1930

120837

2000

XIZ

X66

D3536-15

Manufactured

No

270

Each

28.0000

1

1

D3536-15

Gasket

**

1381343 (x1) u 12/04/19

Location

Loc Qty

Loc Code

FP002

28

73318

16

80333

12

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 5

Friday, March 16, 2012 10:40:53 AM

Work Order ID: 81631

81631

Parent Item: D206-642-541

D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 3/16/2012

Required Date: 3/28/2012

Start Qty: 1.00

Required Qty: 1.00

D3536-23

Manufactured No

270

Each

46.0000

1

1

D3536-23

Gasket

**

46.0000LocationLoc QtyLoc Code

FP002

46

43406

1

73312

7

74510

12

80334

26

46.0000

D3536-35

Manufactured No

270

Each

36.0000

1

1

D3536-35

Gasket

**

36.0000LocationLoc QtyLoc Code

FP002

36

74511

9

80335

27

36.0000

D3536-39

Manufactured No

270

Each

20.0000

1

1

D3536-39

Gasket

**

20.0000LocationLoc QtyLoc Code

FP002

20

73317

20

20.0000

D3535-15

Manufactured No

270

Each

26.0000

1

1

D3535-15

Wearshoe

**

26.0000LocationLoc QtyLoc Code

FP001

26

73315

2

74512

12

80328

12

26.0000

Friday, March 16, 2012 10:40:54 AM

Shop Packet Print

Page 5

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Friday, March 16, 2012 10:40:54 AM

Work Order ID: 81631

81631

Parent Item: D206-642-541

D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 3/16/2012

Required Date: 3/28/2012

Start Qty: 1.00

Required Qty: 1.00

D3535-35

Manufactured No

270

Each

35.0000

1

1

D3535-35

Wearshoe

**

B81358 (x1) 12/04/14

Location

Loc Qty

Loc Code

FP001

35

67598

1

70815

1

78873

13

79849

1

80332

19

D3535-39

Manufactured No

270

Each

26.0000

1

1

D3535-39

Wearshoe

**

12/04/14

Location

Loc Qty

Loc Code

FP001

26

69759

1

73316

13

74513

12

D3535-23

Manufactured No

270

Each

39.0000

1

1

D3535-23

Wearshoe

**

12/04/14

Location

Loc Qty

Loc Code

FP001

39

73314

10

74508

11

80330

18

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 7

Friday, March 16, 2012 10:40:54 AM

Work Order ID: 81631

81631

Parent Item: D206-642-541

D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 3/16/2012

Required Date: 3/28/2012

Start Qty: 1.00

Required Qty: 1.00

D3537-3 Manufactured No 270 Each 18.0000 1 1

D3537-3

Wearpad

**

1378836 (x1) all also 20

Location Loc Qty Loc Code

FP002 18
74500 13
76986 5

D3537-1 Manufactured No 270 Each 189.0000 9 9

D3537-1

Wearpad

**

873716 (x9) all about 19

Location Loc Qty Loc Code

FP001 104
79833 50
79835 54
FP002 85
69817 5
79834 38
80336 42

AN960C10L NAS1149C0332 Purchased No 270 Each 0.0000 80 80

*AN960C10I *

washer

**

11121255 (x80) all 12/01/19

AN960C416 NAS1149C0463 Purchased No 270 Each 0.0000 1 1

AN960C416

washer

**

1117735 (x11) all 12/01/19

Friday, March 16, 2012 10:40:54 AM

Shop Packet Print

Page 7

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 8

Friday, March 16, 2012 10:40:54 AM

Work Order ID: 81631

81631

Parent Item: D206-642-541

D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 3/16/2012

Required Date: 3/28/2012

Start Qty: 1.00

Required Qty: 1.00

D3672-1

Manufactured No

270

Each

1,202.000

2

2

D3672-1

Phenolic Washer

**

22 12/04/19

Location

Loc Qty

Loc Code

FP001

198

66821

198

ST060

1004

72229

4

76277

500

80369

500

x2

AN3C4A

Purchased

No

270

Each

3,755.000

80

80

AN3C4A

BOLT

**

22 12/04/19

Location

Loc Qty

Loc Code

ST350

3255

117688

5

118112

16

119749

10

120187

2000

120423

10

120521

510

120769

515

120799

123

120930

66

ST351

500

121060

500

x80

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 9

Friday, March 16, 2012 10:40:54 AM

Work Order ID: 81631

81631

Parent Item: D206-642-541

D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 3/16/2012

Required Date: 3/28/2012

Start Qty: 1.00

Required Qty: 1.00

AN4C5A	Purchased	No	270	Each	269.0000	1	1	
AN4C5A								
BOLT								

**

Handwritten: 12/05/19

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST355	269	
112243	169	
119017	100	

Handwritten: x1

D2646	Manufactured	No	270	Each	125.0000	1	1	
D2646								
Aft Cap								

**

Handwritten: 12/05/19

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP002	125	
62678	5	
68280	5	
70945	1	
71070	2	
73294	1	
73825	2	
78018	26	
79500	33	
79562	50	

Handwritten: x1

D3413-1	Manufactured	No	270	Each	79.0000	1	1	
D3413-1								
Ring								

**

Handwritten: 12/05/19

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST420	21	
70773	1	
79233	20	
ST464	58	
76754	34	
77940	2	
80224	22	

Handwritten: x1

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____
Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART**RELEASED**

07.02.12

DEO ATTACHED

DESIGN CP	DRAWN BY PH	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
CHECKED [Signature]	APPROVED [Signature]	DRAWING NO. D3274	REV. D SHEET 1 OF 4
DATE 06.12.19		TITLE SKIDTUBE ASSEMBLY SCALE NTS	
A	04.03.15	NEW ISSUE	
B	04.08.09	MOVE SADDLE HOLE: 42.14 WAS 42.76	
C	05.03.16	ADD -043; NEW INSERTS	
D	06.12.19	NEW INSERTS, SS WEARSHOE + GASKET	

Qty -041	Qty -043	Part Number	Description
X		D3274-041	SKIDTUBE ASSEMBLY
	X	D3274-043	SKIDTUBE ASSEMBLY
1	1	D2600-1-240	EXTRUSION
1	1	D2646	AFT CAP
12	12	D2649	CROSS BOLT SPACER
12	37	D3275-1	CROSS BOLT SPACER
1	1	D3282-041	FLOAT WEB
1	1	D3285-1	CAP
1	1	D3413-1	RING
1	1	D3415-041	NUT PLATE
1	1	D3535-15	WEARSHOE
1	1	D3535-23	WEARSHOE
1	1	D3535-35	WEARSHOE
1	1	D3535-39	WEARSHOE
1	1	D3536-15	GASKET
1	1	D3536-23	GASKET
1	1	D3536-35	GASKET
1	1	D3536-39	GASKET
9	9	D3537-1	WEARPAD
1	1	D3537-3	WEARPAD
78	78	ALS7-1032-130	INSERT (or AKS4-1032-130, ALS4-1032-130, AELS-1032-130)
80	80	AN3C4A	BOLT
1	1	AN4C5A	BOLT
1	1	AN960C416	WASHER
80	80	AN960C10L	WASHER
2	2	CCR264SS3-3	RIVET
2	2	CR3212-4-03	RIVET
2	2	NAS1515H3L	WASHER

GENERAL NOTES:

- TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- DAMAGE TOLERANCE ON FWD BEND:
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 7 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
- ALL HOLES DRILLED ON CENTERLINES.
- BOND D3282-041 FLOAT WEB INTO D3274-1/-3 OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/291 ADHESIVE PER DART QSI 015. ENSURE HOLES LINE-UP.
- WELDING TO BE DONE PER DART QSI 004.
- FINISH: - ACID ETCH, ALODINE ASSEMBLY PER DART QSI 005 4.1
- POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
- DRILL Ø0.297 HOLES FOR ALS7-1032-130 INSERTS USING DT3274-1T2 BEFORE FINISH. INSTALL ALS7-1032-130 INSERTS AFTER FINISH. SEAL WEARSHOE BOLTS WITH SIKAFLEX -241/-291.
- SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.

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SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 8/1631
12-03-16

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

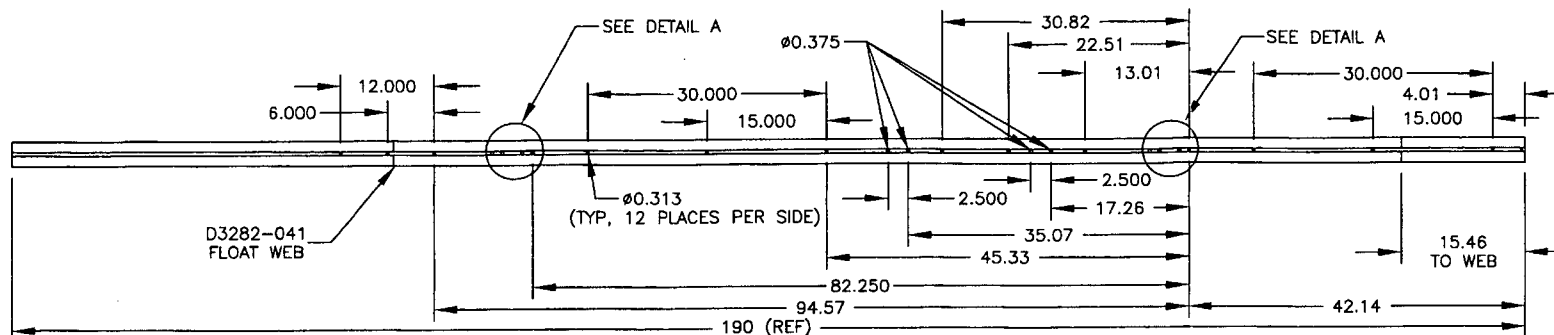
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

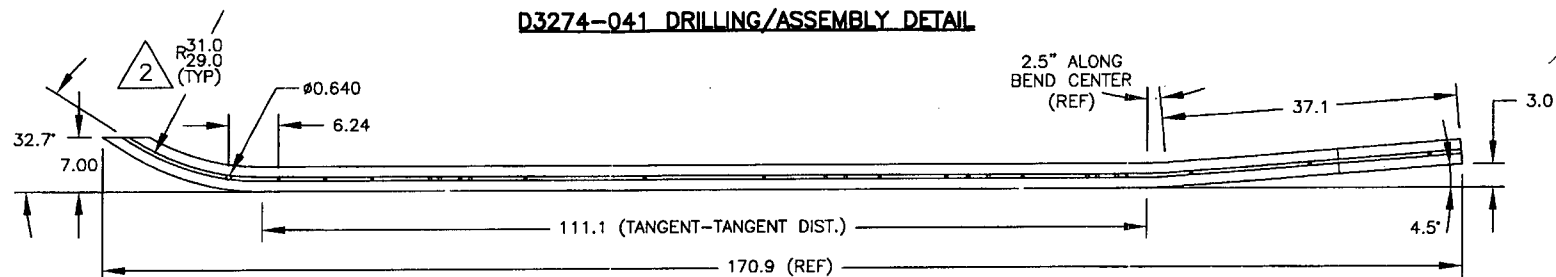
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

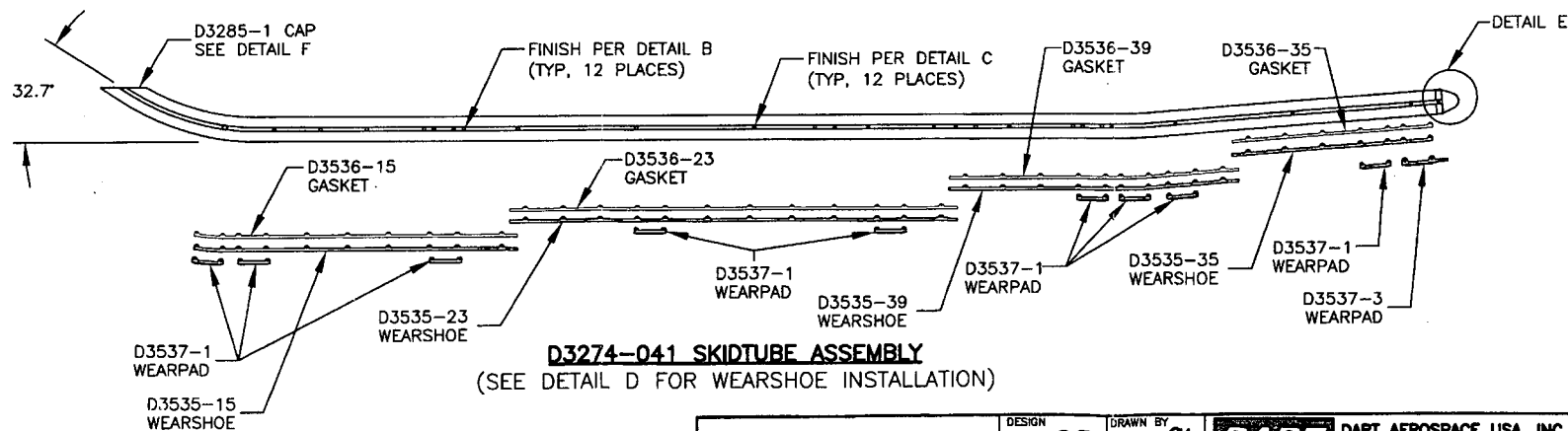
DEO ATTACHED



D3274-041 DRILLING/ASSEMBLY DETAIL



D3274-041 BEND/DRILLING DETAIL



D3274-041 SKIDTUBE ASSEMBLY
(SEE DETAIL D FOR WEARSHOE INSTALLATION)

RELEASED

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DESIGN	CP	DRAWN BY	PH	DART DART AEROSPACE USA, INC. PORT HADLOCK, MA	REV. D
CHECKED	#	APPROVED	#	DRAWING NO. D3274	SHEET 2 OF 4
DATE	06.12.19	TITLE	SKIDTUBE ASSEMBLY	SCALE	1:15

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

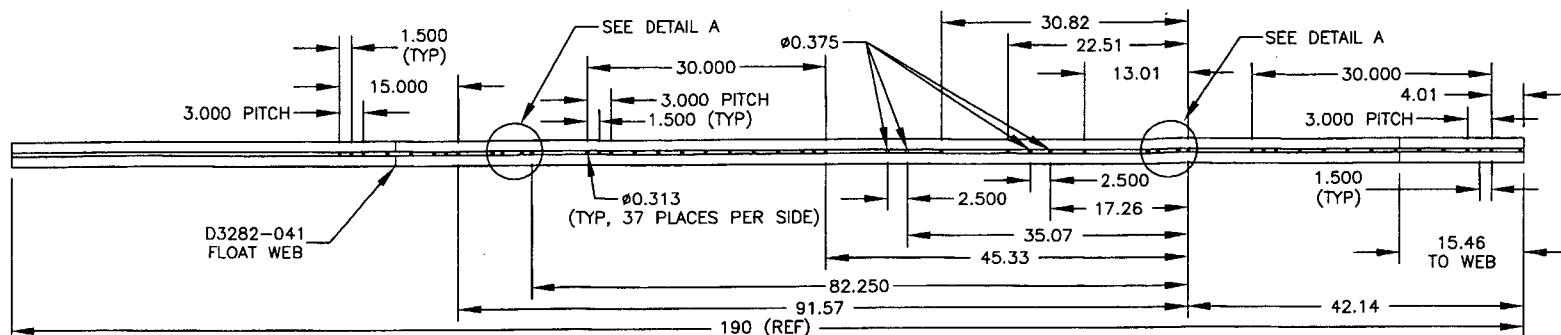
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

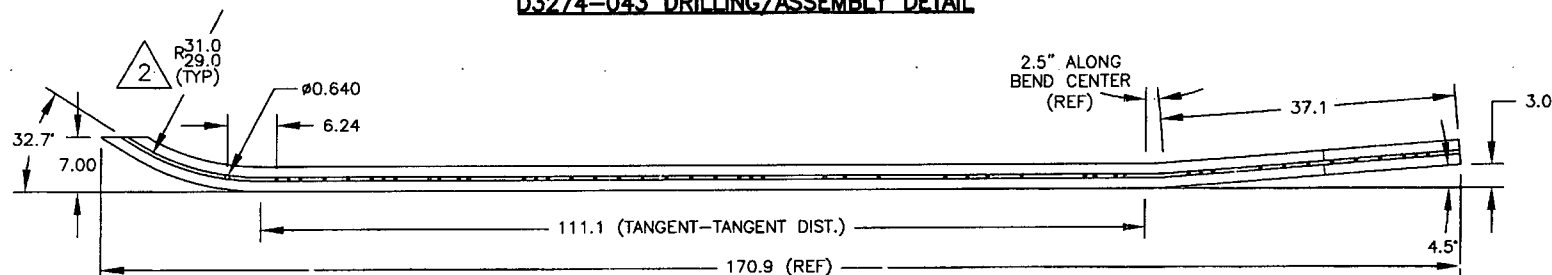
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

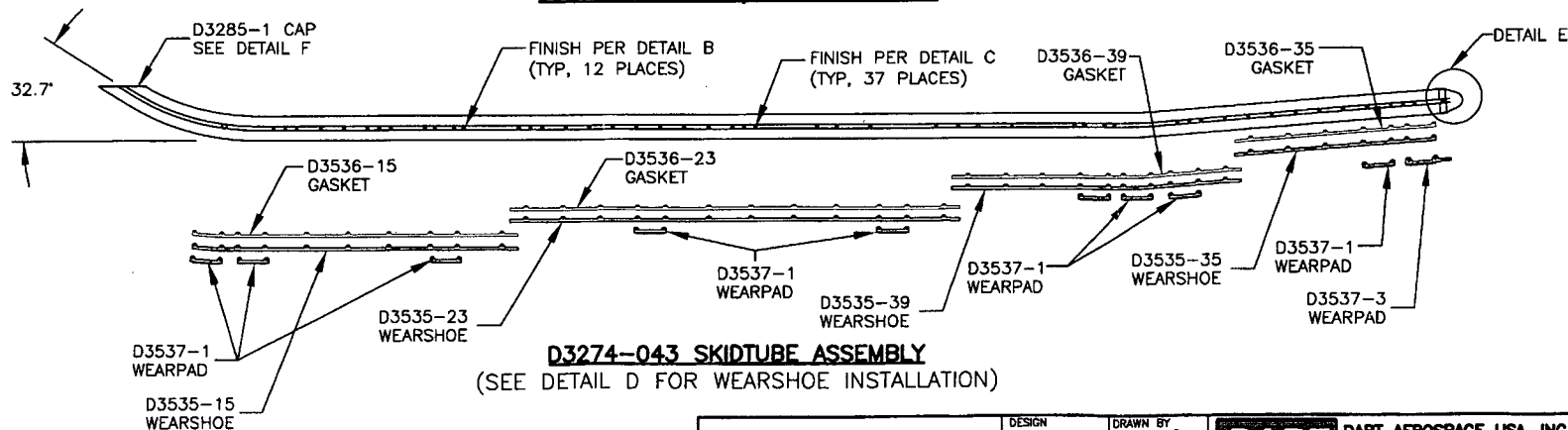
DEO ATTACHED



D3274-043 DRILLING/ASSEMBLY DETAIL



D3274-043 BEND/DRILLING DETAIL



D3274-043 SKIDTUBE ASSEMBLY
(SEE DETAIL D FOR WEARSHOE INSTALLATION)

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DESIGN	CP	DRAWN BY	PH	DART DART AEROSPACE USA, INC. PORT HADLOCK, WA	REV. D
CHECKED	H	APPROVED	H	DRAWING NO. D3274	SHEET 3 OF 4
DATE	06.12.19	TITLE	SKIDTUBE ASSEMBLY	SCALE	1:15

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

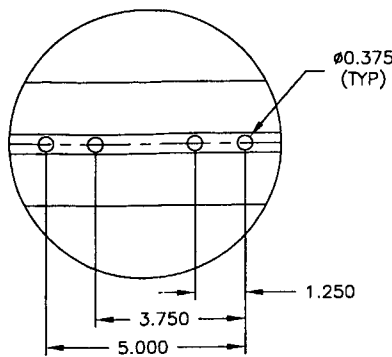
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

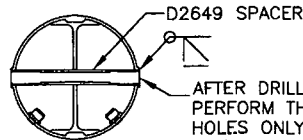
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DETAIL A: DRILL DETAIL

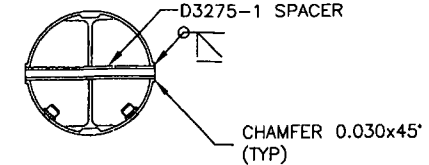


DETAIL B FOR 0.375 HOLES ONLY

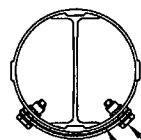


- AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR 0.375
HOLES ONLY:
1. CHAMFER HOLE 0.030x45°
 2. INSERT D2649 SPACER
 3. WELD INTO PLACE AND GRIND FLUSH
 4. C'BORE TO 0.313x0.75 DEEP

DETAIL C FOR 0.313 HOLES ONLY



DETAIL D



- ALS7-1032-130 INSERT (1)
AN3C4A BOLT (1)
AN960C10L WASHER (1)
(78 PLACES)

GASKET/WEARSHOE/WEARPAD (REF)

DETAIL E

- AN3C4A BOLT (1)
AN960C10L WASHER (1)
NAS1515H3L WASHER (1)
(2 PLACES)
INSTALL WITH SIKAFLEX-241/-291

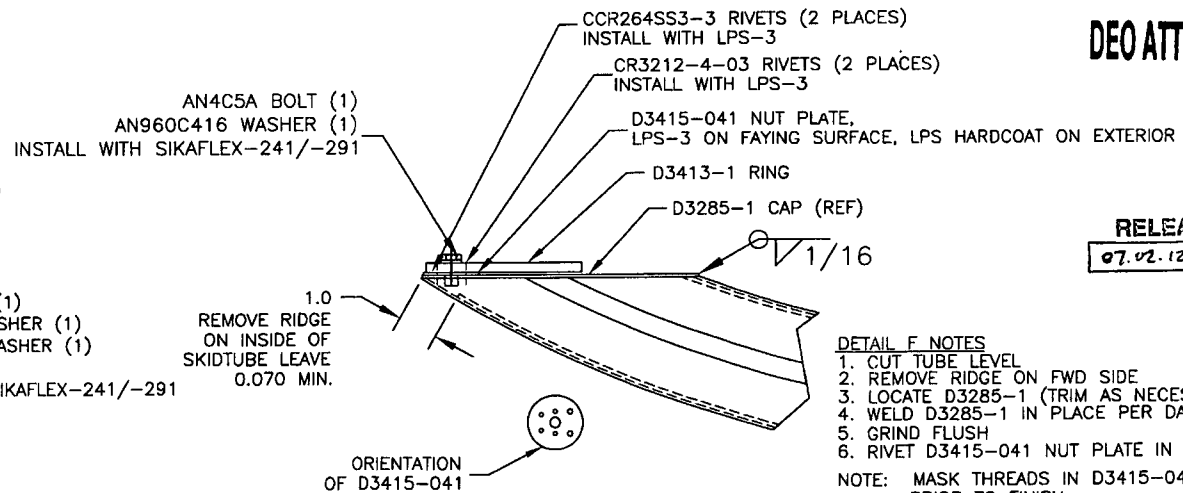
D2646 CAP
SEAL WITH
SIKAFLEX-241/291
ADHESIVE

0.208 (2 PLACES)
DRILL PRIOR TO INSTALLING
D2646 CAP

BORE OUT END OF SKIDTUBE
TO 0.75 DEPTH AND 0.070 WALL

0.400

DETAIL F: END FINISHING DETAIL



DETAIL F NOTES

1. CUT TUBE LEVEL
2. REMOVE RIDGE ON FWD SIDE
3. LOCATE D3285-1 (TRIM AS NECESSARY)
4. WELD D3285-1 IN PLACE PER DART QSI 004
5. GRIND FLUSH
6. RIVET D3415-041 NUT PLATE IN PLACE

NOTE: MASK THREADS IN D3415-041
PRIOR TO FINISH

DEO ATTACHED

RELEASED
07.02.12

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DART AEROSPACE USA, INC.

DESIGN CP	DRAWN BY PH	DART DART AEROSPACE USA, INC. PORT HADLOCK, MA
CHECKED H	APPROVED H	DRAWING NO. D3274
DATE 06.12.19	TITLE SKIDTUBE ASSEMBLY	REV. D SHEET 4 OF 4 SCALE 1:3

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

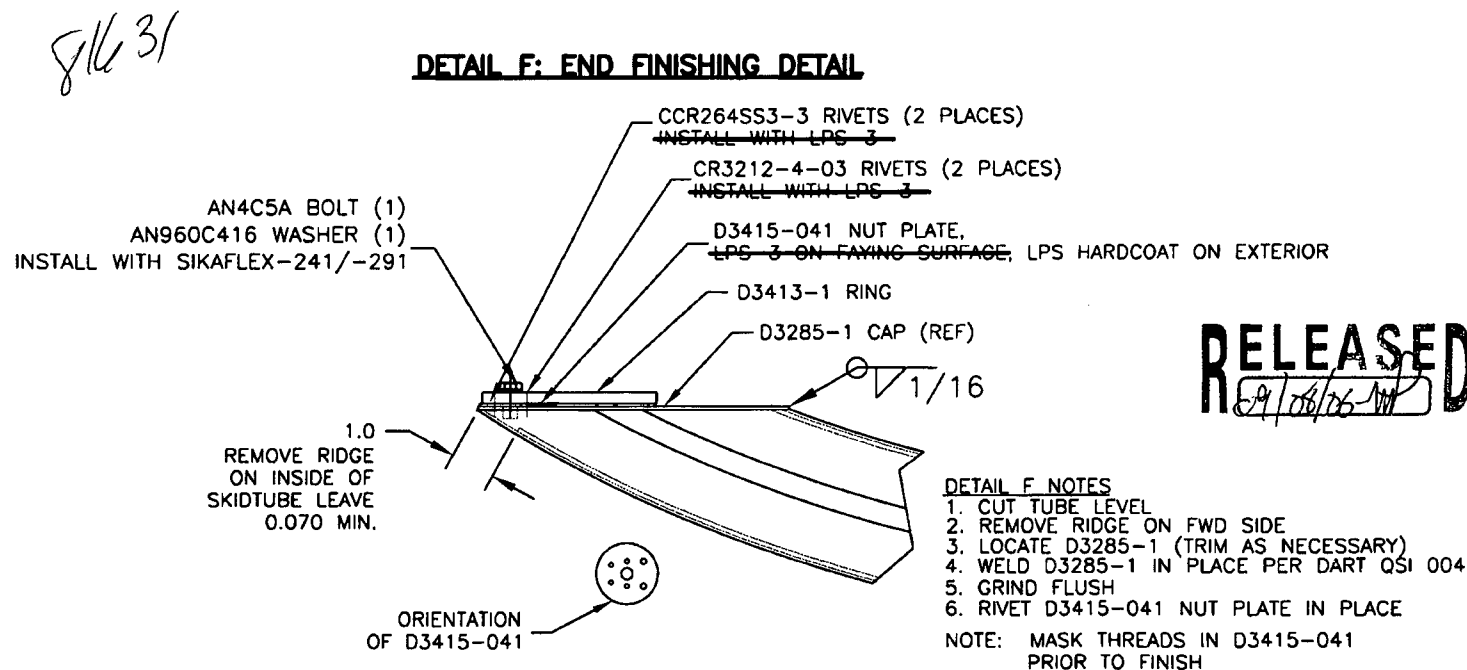
NOTE: Date & initial all entries

DRAWING NO. D3274	TITLE SKIDTUBE ASSEMBLY	REV. D	DART AEROSPACE USA, INC ENGINEERING ORDER	D.E.O. NO. D3274-D-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>UP</i>	CHECKED <i>A</i>	MFG. APPR. <i>A</i>	APPROVED <i>MAP</i>	DE APPR. <i>#</i>		
DATE 09.06.17	DATE 09.06.23	DATE 09/06/23	DATE 09/06/23	DATE 09.06.23		

LPS-3 IS NO LONGER USED DURING ASSEMBLY OF SKIDTUBE.

AMEND NOTE 8: "~~SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES 'LPS 3' AFTER FINISH AND INSTALLATION OF INSERTS.~~
COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES 'LPS PROCYON' AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF
POWDER COATING WITH MEK DEGREASER."

AMEND DETAIL F AS SHOWN:



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

NO. 287

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barclay Elliott
Job number: 796517
Part number: A206-646-341
Description: Skid tube
Welding Process: Tig[☒] Mig[]
Base material: Alum
Current: AC[☒] DC[]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[]
Penetration: pass[☒] fail[]

UNACCEPTABLE

Cracks: pass[☒] fail[]
Undercut: pass[☒] fail[]
Pin holes: pass[☒] fail[]
Overlap (cold lap): pass[☒] fail[]
Porosity (surface): pass[☒] fail[]
Coloration: pass[☒] fail[]

Qualifier David Hand Date of Test Coupon 12-04-03
Welder Barclay Elliott Date of Test Coupon 12-04-03

The above named individual is qualified in accordance with AWS D17.1.2001 to weld